



Dr. Robert Bastian

Vocal Surgery, Myths, and More: An Interview with Dr. Robert Bastian

BY RANDAL BUESCHER

When Dr. Robert Bastian was studying medicine, he was taught to “never operate on singers.” But in his early years of practice, he began to question this prevailing dictum. Now highly revered for his 25-year career treating singers, Dr. Bastian discusses how attitudes about surgery have evolved, when he feels surgery is necessary and what the positive and negative effects are, what he considers the major vocal myths, and why voice teachers need to be well educated when it comes to surgery and vocal health.

Robert W. Bastian, M.D., founded Bastian Voice Institute in 2003. Previously, he reached the rank of professor in the Department of Otolaryngology at Loyola University in Chicago and maintains a current affiliation there as clinical professor of otolaryngology. For more than 25 years, Dr. Bastian’s work has focused exclusively on voice, swallowing, and airway disorders. Particular areas of interest include vocal fold microsurgery

with a lifetime caseload estimated at more than 4,000, of which more than 1,000 are singers.

In addition, Dr. Bastian follows noteworthy caseloads of patients with spasmodic dysphonia and adult recurrent respiratory papillomatosis. He is known as well as a pioneer of modern office-based surgical procedures, including use of the pulsed-KTP and thulium lasers. Other areas of expertise include swallowing disorders,

nonorganic voice and airway disorders, and laser and other surgeries for larynx and pharynx cancer.

On a fall morning at the Bastian Voice Institute, I had the privilege of talking with Dr. Bastian. I have worked with him on numerous cases of pre- and postoperative voice-disordered singers. He was the first to explore new techniques in operating on singers, and his efforts and results forever changed the paradigm of singers and vocal fold



surgery. What follows is a lightly edited version of our conversation.

How and why did you start performing surgery on singers?

As background, the dictum in residency was “Never operate on singers—you’ll make them worse.” I don’t think I ever saw a surgical procedure in a singer during my training. In addition, at the voice meetings I attended around that time, speech therapy and singing therapy seemed to be generally viewed as the entire answer to vocal fold injuries. I don’t remember any dissenting opinions and so I initially

accepted this. But soon my experience began to throw this belief system into question.

What, for example, shook your confidence in the prevailing wisdom?

First, I had a colleague who had undergone vocal fold microsurgery in Europe and said it was extremely successful in restoring [his] singing voice. This piqued my curiosity. Second, the stroboscopy examinations I was doing at the time began to teach me that lengthy speech therapy didn’t fully resolve some injuries. Such persons were sometimes told elsewhere that the

problem had resolved or maybe that the voice was growing and maturing (“I’m really a spinto.”).

I learned that some singers were working mightily to view their *improvement* to be *complete resolution*. And they continued to search for that last “technical” solution to vocal limitations. Yet, when I applied high-range “boy-soprano” pianissimo “swelling checks” to voices that were said to be recovered, I still heard considerable impairment. And videostroboscopy performed during phonation at extremely high pitch showed ongoing injury.

And, finally, in response to the many questions I asked such individuals, I began to understand that the most revealing symptom of mucosal injury was not hoarseness, but instead one or more of the following: day-to-day variability of capability, increased effort, reduced vocal (mucosal) endurance, loss of high pianissimo, and phonatory onset delays. Such symptoms of mucosal injury were sometimes mistakenly considered to be technical, because technical refinements could reduce or conceal them.

So how did these observations lead you to doing surgery in singers?

It was step-wise. I had found Dr. Kleinsasser’s classic book on vocal

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Bastian educates a patient on a procedure, an important part of his work at the Bastian Voice Institute.



Dr. Bastian shows a patient the results of a videoendoscopy procedure.

fold microsurgery one day during residency, tucked away in the library. It was a startling revelation. Through that book, I was introduced to microsurgical instruments that I had never previously seen. Later, using such instruments, I began—very cautiously and only after the singer had undergone lengthy therapy (at least six months back then)—to offer the option of microsurgery. The first few were those who could not accept or work around their impairment after months or years of trying.

To my surprise (and enormous relief), the voices of the first few singers were restored to a remarkable degree. Vibratory ability and match between the folds returned to normal, along with the voice's capabilities. Because the surgery was precise and superficial, there was no detectable scarring under stroboscopic examination, even at C6 for soprano voices.

The last step that really settled my commitment to vocal fold microsurgery as an option in the rehabilitative realm was a single day I spent in the operating

room with a wonderful surgeon and fine man, Dr. Marc Bouchayer, in Vénissieux outside of Lyon, France. As I recall, I saw him do five cases in a morning and also had good conversations with him about his experience with surgery in singers. During that visit, everything went “click.” All of this gave me the courage to swim against the current.

Describe what it was like to swim against the current.

An anecdote will illustrate: Maybe a year or two later, I was invited to be on a panel on vocal fold microsurgery in singers. I was already feeling embarrassed and out of place due to my youth. Then, to my dismay, at the end of the panel someone asked, “Could each panelist tell us how many singers you have operated on?” I was astonished to learn, together with the audience, that the rest of the panelists, combined, had only operated upon one singer. I was the last one in line and was forced to answer, “I’ve done nine singers.”

In retrospect, I think this was perceived as “knife happy” both because of my youth and because it so conflicted with the belief systems in the room. The audience didn’t know how slowly, carefully, and cautiously I had proceeded, and I think it took years to overcome this undeserved reputation.

Dr. Bastian uses a KTP laser for in-office surgery.



Yet, having subsequently performed surgery in many hundreds of singers, I have come to see that the very small risk of surgery (for nodules, polyps, and capillary ectasia) must be balanced

against what can be a huge risk to life purposes and even career of *not* doing surgery when confronted by otherwise-irreversible lesions.

Why was surgery seen as so potentially dangerous to singers?

If surgeons at that time didn't routinely assess results with videostroboscopy, and if in addition they didn't know vibratory dynamics and vocal fold microarchitecture, then they didn't have the kind of understanding and tools for self-criticism to do safe vocal fold microsurgery. It is easy to ruin vocal folds without this knowledge—and fairly straightforward to restore vocal folds (especially for nodules and polyps) with this fund of knowledge.

What was the surgical technique of the time?

There would have been lots of differences between surgeons, just as there are today. Surgeons such as Dr. Bouchayer were already doing wonderfully precise surgery. Yet, it was still common at that time (and, in fact, was part of my residency training) to use a technique known as vocal fold stripping: you grasp the mucosa just in front of the lesion (polyp, nodules) with forceps. You turn the forceps to break the mucosa and you pull along the line of the fold. This, in turn, peels the mucosa away.

The problem is that it can be both overly generous and only semi-controlled. Or, in the early day of lasers, the spot size was very large and the zone of thermal injury even larger—and, especially without the fund of knowledge mentioned above, you could scar the folds.

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“Speech/voice therapy also prepares the individual for surgery with instruction in anatomy, the mechanism of vibrational injury, what to do with voice perioperatively, and so forth. And of course, if the singer begins to improve in the first month or two of therapy, that may encourage him or her to give it more time to see if surgery can be avoided.”

How have techniques and instrumentation changed since stripping?

You now use tiny, tiny forceps that allow you to grasp a very specific part of the fold and you then use scissors with blades measured in millimeters to remove only the lesion, with no margin. The resulting “wound”—the term almost doesn’t fit—is tiny and very superficial. There is no incision for the majority of singers—although for certain uncommon disorders, like cysts, a tiny incision and dissection technique may be used.

Of course, different surgeons who currently operate on singers will have some differences about exactly the best technique. Yet, if they have consistently great results judged by rapid return of that “boy-soprano” pianissimo in highest reaches of the voice and videostroboscopically proven restoration of vocal fold margin and oscillatory ability at very high pitch, then such differences of opinion are fine.

Is there still risk involved?

There is the tiny risk of general anesthesia and, despite use of a tooth guard, a slight risk of a roughened or even chipped upper central tooth. Taken together, these risks are extremely small. The real issue is that the precise degree of improvement cannot be guaranteed, even though the typical improvement is major—for nodules and polyps, that is. It is also possible to get what I call the “110 percent result.” The singer will say, “I wanted to get the voice back that I had

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two years ago, thinking my voice was normal then—but now I think I must have had a problem even then, because I can do things with my voice now that I have never been able to do before.”

Risk is greater for surgery that involves an incision and dissection, like for a cyst or sulcus. The initial postoperative hoarseness will be longer, and the final result isn't as good on average. It is still possible to get a wonderful result after incisional surgery, but not as routinely as after nodule and polyp surgery.

What about the use of lasers in surgery?

“Cold” instruments and laser each have specific best uses. I use cold instruments where possible, but ask that every case be set up with the laser in the room on standby. Why would a workman leave even an infrequently used tool at home? Still, it is more about knowing what to do than [it is about] the specific tool.

The argument I have run up against is that it creates a zone of destruction beyond the point of stoppage.

It is a beam of light that cuts, and there is a tiny zone of thermal damage. This was a major problem with the original 1.0 mm spot size, but dramatically less for the modern 0.2 mm (that's 1/5 of a mm) spot size, not to mention other kinds of laser. It can also be counteracted by Bouchayer's technique of saline injection for hydro-dissection and use as a heat sink. Again, the surgeon's understanding matters much more than the tool.

What about vocal therapy?

It is virtually always appropriate, but individualization is the key when determining amount and duration. Think, for example, of a person who is [moderately] talkative by nature, whose vocal demands are moderate, and who has lived to age 40 without any episodes of voice trouble but now has a “fluke

injury” kind of hemorrhagic polyp after an episode of screaming. Such a person might need a single session of therapy and, at the appropriate postoperative interval, to return to normal singing lessons.

Most injured singers need more because they are “vocal overdoers.” That is, they are social and extroverted and vocal demands are great. In this kind of person, the “quick fix” kind of surgery is to be avoided, because you could predict another injury at some point. Speech/voice therapy also prepares the individual for surgery with instruction in anatomy, the mechanism of vibrational injury, what to do with voice perioperatively, and so forth. And of course, if the singer begins to improve in the first month or two of therapy, that may encourage him or her to give it more time to see if surgery can be avoided.

What about teachers that spread fear of surgery?

Singing teachers who know of a disastrous outcome from surgery are understandably skeptical. And they are right to convey the message that surgery is not the first resort. Conversely, the teacher who has had experience teaching singers with successful surgery in their past will be more likely to understand that surgery can be a very important option for *otherwise irreversible* mucosal injuries.

Is there any circumstance where surgery is offered at diagnosis?

Yes. A singer who cannot sing and has an epidermoid cyst has no real choice but to consider surgery—unless he or she is ready to retire from singing. Also, the real world occasionally presents situations where practical considerations might trump an “ideal world” kind of approach.



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For example, what if a singer has a large hemorrhagic polyp, supports his family through singing, insurance is running out, and has an exceedingly important, highly remunerative series of performance on the schedule in 10 weeks? We sometimes have to forge ahead with surgery to salvage that scenario. Life doesn't always allow us to color within the lines.

Describe the typical singer who requires surgery.

It is usually someone who fits the “vocal overdoer syndrome” [see below] and who has struggled for months to years. They are unhappy and in crisis. They may or may not have had a clear diagnosis. There may be a lot of understandable frustration and emotion. Some are in a kind of denial, thinking that the next teacher or technical breakthrough is going to be the solution.

Once a precise diagnosis is made and explained, we usually follow conservative measures for some months to prove irreversibility. To satisfy a personal process, some singers require years of frustration and searching for alternate solutions before they are ready for this step. We respect personal preference and tailor the timing and sequence on an individualized basis.

What role do the voice teacher and technique play in the formation of lesions, etc.?

I think the hands-down source of injury is what I call the “vocal overdoer syndrome.” This is defined as the combination of intrinsic, personality-based tendency to use the voice a lot (using a seven-point scale, most are “sixes” or “sevens”) together with extrinsic demand or opportunity to use voice (occupation, performance, family, hobby, etc.). When working with a student who is a “vocal overdoer,” voice teachers are overwhelmingly a source of wise counsel and care for the voice.

What about vocal rest?

Brief, fairly strict voice rest may be fine for acute laryngitis, in the first few days after a vocal fold hemorrhage, and in cases of acute vocal trauma. Much more often, I like better the idea of “vocal prudence” tailored to fit both the injury and the person's life circumstance.

As for voice rest after surgery: limited talking and singing can resume on the fourth postoperative day. Over the next few weeks, the amount of voice use is gradually increased. Return to public performance is typically possible (with some obvious caveats and careful

monitoring of “swelling checks”) within six weeks of surgery, sometimes less.

Do reflux and allergies contribute to injuries and/or lesions?

They are not a cause but are often—yet not as often as often thought—a contributor. Here's an analogy. Let's say you are a gardener and on the first day of spring you go out and shovel and hoe and rake. After two hours, your hands start to smart and you develop blisters. The following year, beginning again with normal skin, you soak your hands in water for an hour before you go out the first time. This time it only takes one hour for the blisters to form. We would understand that it was still friction that caused the blisters, though the water may have lowered the threshold. That's how I think of allergy and acid reflux.

What are your thoughts about high-profile surgical failures like Julie Andrews?

Without detailed information about the original lesions and the surgical technique, etc., I can't really comment. But for nodules and polyps, this sort of result should be extremely uncommon and even rare.

Why is it important that voice teachers know about the role of vocal fold surgery?

Because voice teachers are viewed as experts about voice and as advocates and they are often the instigators of a laryngology consultation. Also, the voice teacher is a very important part of pre- and postoperative care.

What can singers do to guard against the occurrence or reoccurrence of mucosal injuries?

A working knowledge of “the vocal overdoer syndrome,” vocal fold microarchitecture, and vibratory behavior are in and of themselves protective. Beyond this, particularly for the subset of singers who would describe themselves as a six or seven on the seven-

point talkativeness scale, daily “swelling checks” are helpful. I alluded to these previously.

A good test is to sing the opening phrase of “Happy Birthday” in a “boy-soprano” pianissimo going up by half steps. The singer goes up until there is a change of quality (hoarseness, breathiness, etc.) and then, on that same [top] note, does a five-note descending staccato figure. If the voice is better with the onset, it is a prephonatory gapping issue. If it is the same or worse, it is more likely to be swelling and vocal prudence should be used. Of course, common sense things like hydration reflux management are important.

What are the biggest vocal myths?

One is that if I have a big voice, then it is normal not to be able to sing a true pianissimo. Another is that if you have an ironclad technique, you will never injure yourself (of course, it helps but it will not

endlessly protect from overuse). Or, that allergies or acid reflux cause nodules and polyps. There is also sometimes confusion between technical and physical limitations of vocal capability.

What is the overall role of surgery in restoring a voice?

It is an option chronically injured singers should know about. Of course, if surgery is avoidable, it should be avoided. But after all other means are exhausted and the singer is still professionally, personally, or psychologically affected by the injury, expertly done vocal fold microsurgery will often restore the voice. To not consider surgery under those circumstances is damaging to the singer and the voice.

How does one know if they are with a qualified surgeon?

It seems to me that more and more surgeons are good at this. The singer

just must find a way to get beyond a *self-representation* of expertise by the surgeon. Ask the surgeon, “How many singers have you done?” Make sure that you will see the videostroboscopy examination performed a week after surgery. Ask around in the singing community. Do your homework and you will most likely be fine.

Chicago-based voice teacher, singer, lecturer, and voice therapist Randy Buescher has a degree in music from DePaul University, along with a B.A. in mass media communications and has taught Grammy winners, Tony Award winners, Disney stars, Dove Award winners, Broadway stars, gospel stars, celebrities, and American Idol finalists. He has one of the largest studios in the United States (regularly seeing up to 95 clients per week) and still actively performs professionally. Visit him on the Web at www.yourtruevoicestudio.com. ©



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